Title: ADVANCING THE SOCIAL PSYCHOLOGY OF RAPID SOCIETAL CHANGE

Short title: *THE PSYCHOLOGY OF RAPID SOCIETAL CHANGE*

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Abstract

In this introduction to the special section on rapid societal change, we highlight the challenges posed by rapid societal changes for social psychology and introduce the seven papers brought together in this special section. Rapid societal changes are qualitative transformations within a society that alter the prevailing societal state. Recent such changes include the election of right-wing populist governments, the Arab Spring revolutions, and devastating civil wars in the Middle East. Conceptually, such events require consideration of how societal-level events relate to more proximal psychological processes to bring about the often abrupt, nonlinear (as opposed to incremental and linear) nature of rapid societal change. They also require empirical approaches that allow such qualitative transformations to be captured and studied. This is true both in terms of directly addressing rapidly-unfolding societal events in research, and in terms of how rapid, discontinuous change can be analysed. The papers in the special section help to address these issues through introducing novel theoretical and methodological approaches to studying rapid societal change, offering multiple perspectives on how macro-level changes can both create, and be created by, micro-level social psychological phenomena.

Advancing the Social Psychology of Rapid Societal Change

> As soon as anything changes in the environment, whether it is the individual himself, or his small private social world, or the social world at large, or the characteristics of the physical environment, [...] new choices confront the individual. The processes which underlie these choices, and thus constitute the psychological aspects of social change at all levels are the proper subject matter of social psychology (Tajfel, 1972, p. 115).

The world is changing, and as Tajfel suggested above, individuals are being confronted with new choices. Some countries and regions are experiencing devastating conflict (e.g., Syria, Yemen). Others (e.g., Venezuela, Romania, and Poland) have seen an upsurge in mass protests against governments. Even 'stable' Western democracies are experiencing upheavals of their own: radicalization and terrorism, populist politics, and polarised electorates are the focus of increasing debate and concern, while the USA and the UK face deep uncertainty following the election of Donald Trump, and the 'Brexit' referendum. These changing social and political landscapes are complex and multi-faceted, but arguably also share at least one feature in common: they are all examples of rapid societal change. In this special section, we define rapid societal changes as qualitative transformations of social and psychological phenomena within a society that occur over a relatively short time span, and that alter the prevailing societal state. Events that may precipitate such social psychological transformations include natural disasters (see Holloway, 2010), technological innovations, political schism, war, and mass migration. Although there is almost inevitably some level of continuity with 'how things were', these events nevertheless create 'opportunity windows' for rapid societal changes to take place (Kitschelt, 1986; Smith,

Thomas, & McGarty, 2015). Moreover, rapid societal changes may have 'ripple effects', leading to other substantive social and psychological consequences.

As social, political, and technological changes in our societies have apparently accelerated in recent years, there has been a corresponding increase in research that aims to understand *social* change (see Figure 1). For example, social psychological science has made good progress in explaining why people engage in social change-related behaviours such as collective action (see van Zomeren, Kutlaca, & Turner-Zwinkels, 2018); intergroup conflict (e.g., Obaidi, Kunst, Kteily, Thomsen, & Sidanius, 2018; Tajfel & Turner, 1979); the contestation of unequal status relations (e.g., Brown-Iannuzzi, Lundberg, Kay, & Payne, 2015; Haslam & Reicher, 2006); recovery from conflict (e.g., Iqbal & Bilali, 2018; McKeown & Taylor, 2018) and/or disaster (Drury, Brown, González, & Miranda, 2016). However, there has been much less research in Psychology that aims to explain the origins and consequences of change at a macro, *societal* level (Figure 1). This is a subtle point. At one level, however local, the social is also the societal (see Reicher, Haslam, Spears, & Reynolds, 2012). However, as we explain in detail below, research on the mobilisation of people as members of groups, and how groups compete and/or reconcile, does not always explicitly relate this mobilisation to society-wide change, particularly when that change is rapid and marked by discontinuities from what went before. In part, this is because the most commonly used methodological and statistical tools in psychological research do not adequately capture how these proximal psychological processes relate to tipping points for more macro-level changes.

Reasons for addressing rapid societal change

The impetus for this special section is that societal change is an intersection between numerous different challenges in social psychology, especially relating to collective action and social change. On the one hand, we wanted to showcase work that is *societal* in its scope

and the implications of the events it studies. This is crucial because the societal level is often the level at which change is most impactful, yet most existing work on collective action and protest is not explicitly posed at this level, focusing instead on more local-level sets of intergoup relations. For example, research on the elaborated social identity model of crowd behaviour (Drury & Reicher, 2000; Stott & Reicher, 1998) has examined psychological change (e.g., collective empowerment; new social identities) resulting from collective action participation. Other research has documented changes in commitment to social/political causes over time (Becker, Tausch, Spears, & Christ, 2011; Tausch & Becker, 2013; Thomas, McGarty, Reese, Berndsen, & Bliuc, 2016; Thomas, Smith, et al., in press), or the impact of the apparent success or failure of a social change attempt (Drury & Reicher, 2005; Louis, 2009). The intergroup focus of this work valuably elucidates local reactions to (sometimes societal) events but it is not designed to address questions about the relationship between psychological processes on one hand, and societal changes on the other. This leaves open questions about how exactly local psychological processes shape societal-level transformations. Because societies contain multiple, diverse and nested layers of psychological entities, social psychology needs models that connect psychological processes across different layers of abstraction.

Whilst recognising and conceptualising the multi-level processes of societal change is one challenge – primarily a conceptual and descriptive challenge – incorporating them into analyses is quite another. Nowak and Vallacher (this issue) provide an analogy that illustrates the scope of this challenge. They suggest that societal changes are like *phase transitions*, like those that occur in physical systems. For example, when water boils, it turns into steam and thus undergoes a phase transition (or in our terms, a qualitative transformation). Yet, how can social psychological research capture these transformations when it tends to focus on (1) linear, incremental changes along single or bipolar dimensions and (2) single levels of

analysis (Livingstone, 2014; see also Gould, 1987)? Our analyses and outcome variables need to capture the possibility that we can experience human behaviour as nonlinear: actions either happen or they do not. Events either happen or they do not. The causes of a terrorist attack, for example, cannot be understood solely in terms of incremental change in a beta coefficient on a continuous scale. Such an attack either happens or it does not. Various terms might be applied to these sharp, discontinuous changes: tipping points (e.g., Grodzins, 1958; Schelling, 1971), thresholds (e.g., Granovetter, 1978), punctuated equilibria (Gould & Eldredge, 1977) or hysteresis and catastrophe (e.g., Zeeman, 1976). How can social psychological theories, methods, and analyses – which overwhelmingly focus on variance explained in a dependent variable – capture such social, behavioural, and material transformations? Mapping abrupt transformations onto quantifiable variation in underlying variables is also made vexed by the so-called arbitrary metrics (Blanton & Jaccard, 2006) that are typically used to assess intangible predictor variables such as social identification (Leach et al., 2008). The numbers we attach to self-report scales have little meaning other than in relative terms within a study; values on a Likert-type scale mean little across studies and contexts, and the numbers also change in meaning with question wording and the number and labelling of response options. These arbitrary metrics thus make it difficult to establish that a change will reliably occur at a particular value of a predictor variable.

A key aim of this special section, then, was to showcase some of the methodological opportunities in studying societal change, as well as addressing conceptual challenges. These opportunities include methods such as agent-based modelling (Smith & Conrey, 2007) and how it can be applied to phenomena that are shaped at multiple levels of analysis and can be characterised by emergent outcomes such as societal transformations (Geschke, Lorenz, & Holtz; Nowak & Vallacher; this issue). Such an approach can provide insights into whether

and when a qualitative transformation of a society is likely to occur, processes underlying the transformation, and the shape it is likely to take.

Together, these conceptual and methodological challenges capture key elements of the research agenda of this special section. A core premise is that the methods we employ to study behaviour have important consequences for both what we find, and our power to understand rapid societal changes. This also has significant implications for theorising about motivations for behaviour. So that we can elucidate – or even 'see' – tipping points for qualitative transformations, we need ways of studying how micro-level or 'local' changes that lead small groups of people to say "enough is enough" (for instance) relate to aggregated, macro-level, societal changes (Livingstone, 2014). A number of articles in this special section build on a growing body of research outside of Psychology that has applied methods such as agent-based modelling, and probabilistic decision trees within a Bayesian framework, to advance theory and practice in a range of applied areas. First and foremost, these methods offer useful, complementary perspectives on when a qualitative shift is likely to occur, and the phenomenological nature of the ensuing changes.

The special section

The twin focus on the 'societal' and the 'change' aspects of rapid societal change has allowed us to bring together a collection of diverse and innovative papers that each offer distinct insights into rapid societal change (Table 1). The articles examine societal changes from the perspective of a variety of contexts, from the US and Western Europe, to Ukraine, Chile, and Poland. The changes include earthquakes, elections, and the widespread adoption of social media innovations. The timescales of change range from the (almost) immediate, in the case of the earthquake in Chile (Maki et al.), to changes that took several years, in the case of Poland's economic and political transformation from one-party rule to free market economy (Novak & Vallacher).

Thus, the contributions of the articles are strikingly diverse in several ways. They draw on a wide range of theoretical resources and employ very different methods. In our view, though, this collection of papers belies its diversity by providing a strikingly unified answer to the challenge of addressing rapid societal change: they show that relatively local-level group processes are involved in transforming whole societies, and conversely that perceptions of societies shape local groups. Thus, micro and macro-level processes are intertwined, and their interaction can and should be operationalised and studied in psychological research; but also societal changes cannot be understood without reference to "local" group processes (see also Thomas, McGarty, Stuart, Smith, & Bourgeois, in press). Furthermore, these papers show that whilst societal transformations can be precipitated by social, natural, and political upheavals, societal changes themselves can also create transformations at other levels.

The contributions by Chayinska et al., Maki et al., and Gaffney et al. each put identity centre stage, but in contexts of societal change arising from very different sudden, precipitating events. Chayinska et al. examine societal change brought about through collective action and mass protest, highlighting the importance of an emergent 'Euromaidan' social movement identity in the events that led to the fall of the Ukrainian government in 2014. Their study is notable not only for obtaining a large survey sample in the midst of such social upheaval, but also for the insights it provides into the role of identity in protests that actually lead to societal change. Integrating the social identity model of collective action (SIMCA; van Zomeren, Postmes, & Spears, 2008) with the encapsulated model of social identity in collective action (EMSICA; Thomas, Mavor, & McGarty, 2012), the analysis highlights how different forms of identity provide a basis for appraisals and emotions underpinning collective action (SIMCA), and also potentially emerge from those appraisals and emotions (EMSICA): Identification with national (Ukraine) and supra-national bodies

(European Union; Russian-led Customs Union) predicted anger, efficacy, and appraisals of illegitimacy, which in turn predicted identification with the emergent Euromaidan social movement. This social movement identification was the proximal predictor of collective action willingness. A key implication is that new, emergent identities may be a critical hinge between established identities and the appraisals they produce, and collective action downstream (Drury & Reicher, 1999; McGarty, Thomas, Lala, Smith, & Bliuc, 2014; Reicher, 1996).

In contrast to the protest-led societal change examined by Chayinska et al., Maki et al examine the consequences of a natural disaster for identity and pro-social behaviour in the form of helping. Focusing on the 2010 earthquake in Chile, which had significant societal consequences, Maki et al. compared national identification and pro-sociality among Chileans sampled before the earthquake with a separate sample recruited after the earthquake. Compared to those sampled before the earthquake, those sampled afterwards reported higher national identification, and stronger intentions to donate money after natural disasters. There was also a unique association between identification and helping, over and above more general pro-social values. In examining the psychological impact of the unexpected societal upheaval caused by a natural disaster such as an earthquake, Maki et al.'s paper thus provides an important addition to the small, but growing body of work on how social identities represent a critical resource for communities (defined in small or even national terms) when it comes to collective coping with natural disasters (see also Drury et al., 2016). More generally, the analysis chimes with Holloway's (2010; see also Solnit, 2010; Fritz, 1996) assertion that disasters provide opportunities for societal change. In quite different ways, Chayinska et al. and Maki et al. thus highlight how social identities provide a means through which people can have at least some agency in positively shaping their own destiny in the face of societal upheaval.

Gaffney et al. (this issue) consider the social psychological consequences of the 2016 election of US President Trump. Specifically, they explore the proposition that the election of new political leaders in and of themselves has consequences for psychological change because they have the potential to re-define political identities (Haslam, Reicher, & Platow, 2010; Reicher, Haslam, & Hopkins, 2005). Elections are a formal group decision process and when a new political leader is voted in (even if not by popular vote!) it implies a consensus that the replacement's "vision" for the group is the endorsed one. Gaffney et al.'s analysis showed that, post-election, President Trump was seen as a more prototypical, representative leader and this effect bolstered commitment to the party. The findings suggest that President Trump's election changed the psychology of "what it means" to be a Republican by providing feedback about what was proper and possible social behaviour for a particular political identity. In this way, a newly elected leader has the potential to redefine national and political identity, provoking social and psychological change.

Of course, not all societal changes create new, redefined identities or 'ways of being', and not all changes require sudden, precipitating events. In line with this, Nowak and Vallacher's agent-based modelling simulations suggest that even when a society, or group, undergoes a change of state, 'bubbles' of old (identities or opinions) survive. Then, certain 'biasing' political and economic conditions enable those bubbles to propagate, join up, and become the majority (the societal norm). Thus, Nowak and Vallacher's model explains the survival, sudden resurgence, and re-popularization of (old) opinions.

To demonstrate their model, Nowak and Vallacher provide the example of the transformation of Poland from a one-party rule society to a free, capitalist market. They show how islands of economic activity appeared in some regions, meaning that during the time of transformation Poland was divided into clusters of 'old-style' economic activities and regions of new entrepreneurial activities. Concurrently, negative attitudes towards communism

correlated with the regions of new economic activity. In this way, the example suggests that societal transformations such as bipolar political polarization can be created through the emergence and (re-)popularization of social psychological 'clusters' of activity and opinions.

Following Nowak and Vallacher, Geschke et al. suggest that the recent polarization and fragmentation of societies into clusters is in part a consequence of the rise in use of social media technology that interacts with people's tendency to self-select into groups of like-minded others. Geschke et al. assert that such technological innovations like algorithmic recommender systems interact with cognitive and social processes, and show how social media have made the formation of polarized psychological clusters, or communities premised on shared opinions, more likely to emerge.

Geschke et al. used agent-based modelling to introduce and simulate the 'triple filter bubble' framework. . In Geschke et al.'s simulations, they allow micro-, meso- and macro-levels to interact to model how psychological clusters form through cognitive, social, and algorithmic processes. They show how different forms of macro-level changes (formation of echo chambers and filter bubbles) can result from social, cognitive and algorithmic filters. The implications is that you need to understand how these different processes interact to predict the substantive form of macro-level changes.

The insights from Nowak and Vallacher's and Geshke et al.'s agent-based models are complemented by Koudenburg et al.'s findings on cross-level mechanisms of polarization. Koudenburg et al., use a novel analysis of shared group variance (similar to clusters) to capture local-group polarization within a societal majority category. They demonstrate that the norms of a societal majority affect the polarization of local groups when those norms are discussed – not when individuals reflect on them alone. The implication is that how individuals respond to a societal norm is shaped by their perceptions of what their more proximal group members think about the societal norm.

Yet, Koudenburg et al.'s experiments showed that this was only the case for negative – not positive – societal norms, suggesting that a negative societal norm creates risky conditions (as the authors say, an 'alarm signal') for political polarization within the majority societal group, and can trigger that society to rapidly divide into opposing opinion-based camps. This shows that people seek to interpret and understand a social category norm through the lens of their more proximal social and psychological connections. Taken together, the contributions of Koudenburg et al., Nowak and Vallacher, and Geschke et al. suggest that the polarization that is often inherent in rapid societal changes should be conceptualized and modelled as the nonlinear emergence of new groups rather than in terms of incremental, linear shifts along existing opinion dimensions.

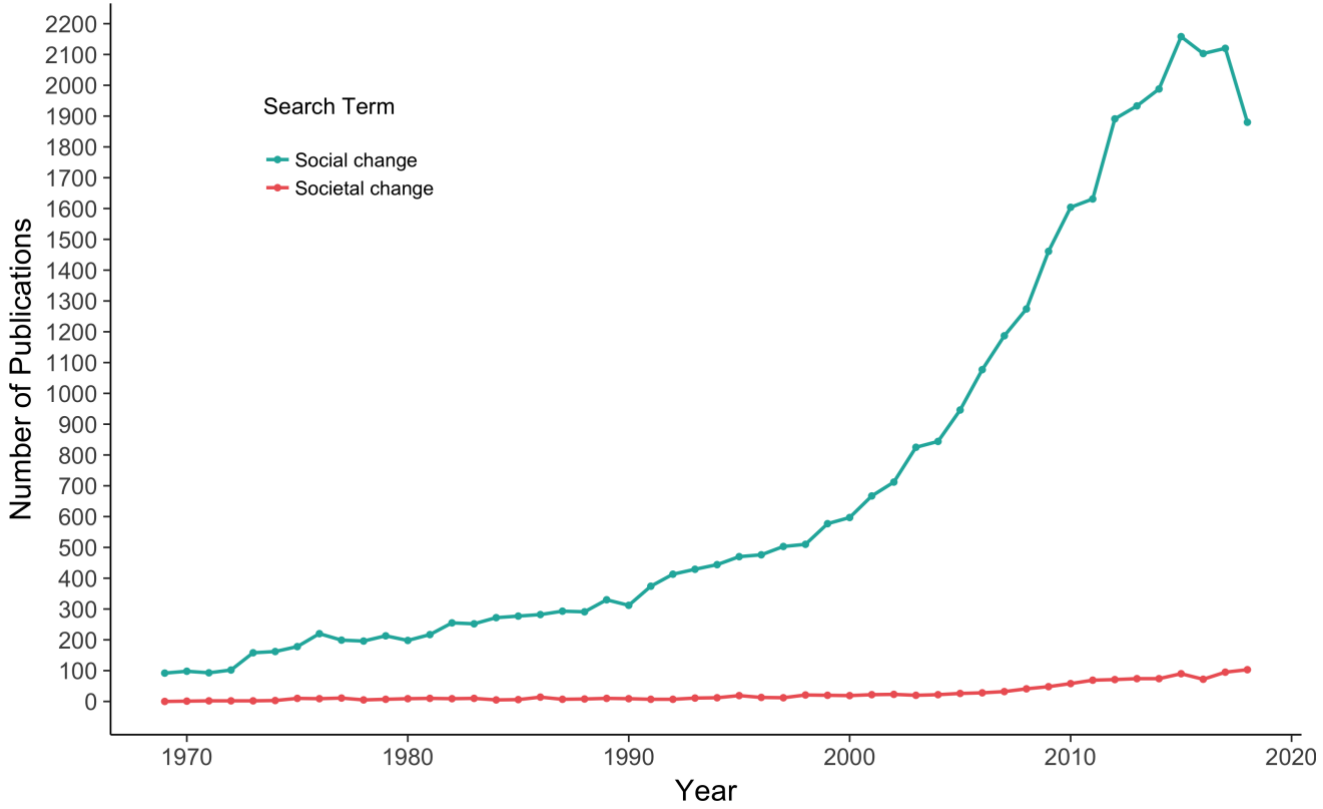
Finally, de la Sablonnière and colleagues take on an important conceptual challenge: that of defining dramatic social change and the conditions that underlie it. de la Sablonnière et al. define dramatic social change as (1) rapid, (2) characterised by rupturing of a group's social and normative structure, and (3) involving threat to a group's cultural identity. They distinguish dramatic social change from other forms of change (e.g., incremental change) that do not meet all or any of these criteria. This is a challenging and very important step in a literature that often alludes to social change, but typically stops short of explicitly defining it. de la Sablonnière and colleagues then go further by proposing a Bayesian probabilistic decision tree framework as a way of modelling the conditions that lead to different societal states, including dramatic social change. This approach balances a concern with modelling the complexity of determinants of dramatic social change, and a need to make such models (1) amenable to simple, context-appropriate changes in the assumptions regarding different conditions underlying change, and (2) useful both analytically and practically, by providing posterior probabilities of different forms of societal state resulting from the inputs into the

model. More generally, this contribution provides a provocative lens through which the other contributions in the special section can be viewed.

Conclusions

Thus far, social psychology has been relatively successful at cataloguing the structural antecedents of collective and social change action, but not at explaining or capturing how these more proximal processes relate to societal-level change, or at predicting the substantive nature or timing of those changes. If, as demonstrated here, rapid societal transformations occur through social psychological clustering processes that are brought about by critical social and psychological conditions, social psychologists need to (1) develop theoretical perspectives and (2) adopt new and different methods to study these transformations. We hope that through this special section's clarion call for methodological innovation and theoretical integration and extension, our field will mobilize to assert ownership over this field of study, and will embrace the challenge of investigating, explaining, and predicting the timing, form, and nature of rapid societal change.

Figure 1. Publications in Psychology matching the search terms, 'social change' and 'societal change', 1968 – 2018 (source: Scopus)



Note. The data on which this figure is based were obtained in October 2018 via Scopus database searches for documents that matched (in the title, abstract, or keywords) the search terms 'social' AND 'change', and 'societal AND 'change', respectively; limiting the documents to those within the subject area 'Psychology'. The search for 'social' AND 'change' yielded 35,870 documents published between 1968 to 2018. The search for 'societal' AND 'change' yielded 1,259 documents published from 1968 to 2018.

Table 1. Overview of articles in special section

Article	Authors	Context of study	Nature of sample	Method	Process of change
1.	Chayinska, Minescu, and McGarty	Ukraine Euromaiden movement	Large, cross-sectional sample of Ukrainian nationals during the Euromaidan protests	Path models	The emergence of a social movement identity (Euromaiden) that provides a critical hinge between existing national and supranational identities, and collective action that produced societal changes.
2.	Maki, Dwyer, Blazek, Snyder, González, and Lay	Natural disaster: Chilean earthquake.	Two cross-sectional samples of Chilean nationals. One sample was obtained before the 2010 earthquake, and one sample after	Comparison of pre- and post-earthquake responses using ANOVA, and regression models predicting helping	Natural disasters as events that can foster change in national identity, which in turn is a key predictor of collective coping, in the form of helping after the disaster.
3.	Gaffney, Sherburne, Hackett, Rast and Hohman	2016 US election of President Trump	Sample Network online panel; American population	Regression	Elections provide information about consensual position of group and can therefore (rapidly) shape group norms and values.
4.	Nowak and Vallacher	Computer simulations of societal transitions based on the dynamic social impact framework; plus case study (Poland:	Poland case study: the number of privately-owned enterprises in the years 1989-1992, aggregated on the smallest administrative unit (county; *N*=3,720)	Agent based modelling; case study	Dynamic social change and bubble theory: Societies in the midst of rapid change are characterized by dual realities corresponding to the new and the old. Change reflects a phase transition, in which bubbles or islands of new appear in the sea of old, grow and connect to each other, and leave the old confined to isolated islands or bubbles. If biasing conditions favour the minority

		communism to democracy 1989-1992)			opinion, social change can ensue, with a potential for the minority opinion to supplant the majority opinion in society.
5.	Geschke, Lorenz, and Holtz	Filter bubbles and echo chambers on social media	12 scenarios, each lasting for 10,000 time steps (~ 3 years in real terms)	Agent based modelling	Three different levels of filters (cognitive, social, and algorithmic) limit the information that is available to individuals thus producing echo chambers and filter bubbles. On a societal level, these filters increase attitudinal differences between opinion-based groups and individuals and cut communication ties between them, leading to attitude clusters, societal fragmentation, and polarisation.
6.	Koudenburg, Greijanus, and Scheepers	Dutch societal majority versus Moroccan immigrants	White Dutch students: Study 1 N = 50 university students; Study 2 N = 159 high school students; Study 3 N = 138 high school students.	Three laboratory experiments	Polarization of the societal majority demographic group into two opposing camps is more likely under a negative societal norm than a positive societal norm; but only when individuals discuss the societal norm with proximal group members.
7.	de la Sablonnière, Lina, and Cardenas	Conceptual model of dramatic social change	N/A	Bayesian decision tree modelling	Defining dramatic social change as occurring when a group's social and normative structure is ruptured and its cultural identity threatened allows the Bayesian decision tree model to be used to calculate the probability with which an event will lead to dramatic (or other types) of social change.

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